UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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WOODCOCK WASHBURN LLP
CIRA CENTRE, 12TH FLOOR
2929 ARCH STREET
PHILADELPHIA, PA 19104-2891

EXAMINER
EBIRIM, EMEKA

ART UNIT	PAPER NUMBER
2166	

DATE MAILED: 12/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/692,508	NOVIK, LEV
	Examiner	Art Unit	
	Emeka Ebirim	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>31 August 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some *   c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Status

1.   This communication is responsive to the Amendments filed on August 31, 2006.

The application has been fully examined and claims 1-30 are rejected and are pending

in this Office Action.

Response to Arguments

Specification

2.   Applicant's amendments with respect to the abstract of the present application

have been fully considered and it overcomes the objections as applied. The objection is

hereby withdrawn.

Claim Objections

3.   Applicant's amendments with respect to claims objections of the present

application have been fully considered and it overcomes the objections as applied. The

objection is hereby withdrawn.

Claim Rejections - 35 USC § 112

4.   Applicant's amendments with respect to claims 1,5, 8-11, 18-21, 25 and 29-30 of

the present application have been fully considered and it overcomes the rejections as

applied. The rejections are hereby withdrawn.

Claim Rejections - 35 USC § 101

5.   Applicant's amendments with respect to claims rejections of claims 21-30 of the

present application have been fully considered and it partly overcomes the rejections as

applied because the claims are now limited to "storage media". However, the claims do

not recite a practical application by producing a physical transformation or producing a

useful, concrete, and tangible results.

Applicant's amendments with respect to claims rejections of claims 11-20 of the

present application have been fully considered however it does not overcome the

rejections as applied. The bodies of the claims are limited to software per se.

Claims 11-30 stand rejected because the claims do not recite a practical

application by producing a physical transformation or producing a useful, concrete, and

tangible results. To perform a physical transformation, the claimed invention must

transform an article of physical object into a different state or thing. Transformation of

data is not a physical transformation. A useful, concrete, and tangible results must be

either specifically recited in the claim or flow inherently therefrom. To be useful the

claimed invention must establish a specific, substantial, and credible utility. To be

concrete the claimed invention must be able to produce reproducible results. To be

tangible the claimed invention must produce a practical application or real world result.

<div align="center">Claim Rejections - 35 USC § 102</div>

6.   Applicants' arguments with respect to claims 1-8, 11-18 and 21-28 of the present

application have been fully considered but are not persuasive. The examiner

respectfully traverses applicant's arguments.

With respect to the independent claims 1, Applicants argue that Peng does not disclose claim 1. The applicant states that, "Claim 1 is directed to synchronizing instances for a data platform, and includes the feature of maintaining a vector for each instance. As claimed, the vector represents all changes that have been made to the instance, by comprising a most recent change number for the instance, and a most recent known change number for each of the other instances that are known to the instance. The prior art fails to disclose or suggest such features."

In response to the above argument, the Examiner respectfully submits that Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Applicant argument is concluded by asserting that "Therefore, the summarizing version vector does not represent all the changes that have been made to an object, but represents all the changes that have been made to an object container, where the object container contains multiple objects"

In response to the above argument, the Examiner respectfully submits that Peng discloses "The summarizing version vector in essence contains the identifiers and the time stamps for all of the objects in the respective containers. As shown at 80, a similar summarizing version vector for a remote object container is shown at 76. It will thus be appreciated that there are summarizing version vectors at a number of locations

throughout the system" [Col 10 lines 7-13]. As such Peng discloses all changes that have been made to an object.

Applicant further argue that "Although the version vector of an object reflects the current state of an object (column 15, line 66 - column 16, line 10), it is not based on a most recent change number for the object, and a most recent known change number for each of the other objects that are known to the object".

In response to the above argument, the Examiner respectfully submits that Peng discloses "The summarizing version vector of an object container is in effect the summary of the version vectors of all the objects and the update stamps of all the differential updates in the object container [Col 15 lines 63-66]. ... *The time stamp in an update stamp can be real time, an update sequence number, or whatever is meaningful to the application*". [Col 16 lines 23-25] (emphasis added)

Claims 11 and 21, which contain similar subject matter as claim 1, stand rejected.

For the above reasons, Examiner believes that rejection of the last Office action was proper. From the foregoing applicants have not met the requirements needed to traverse the rejections made to this application under 35 U.S.C. 102(b). Hence rejections as applied to claims 1-8, 11-18 and 21-28 of the last Office action under this section are sustained.

Claim Rejections - 35 USC § 103

7.   Applicants' arguments with respect to claims 9-10, 19-20, and 29-30 of the

present application have been fully considered but are not persuasive. The examiner

respectfully traverses applicant's arguments.

Peng discloses all the elements of claims 1, 11 and 21 as discussed above under

the 35 USC § 102 section.

Applicant argue that "Sasaki fails to teach or a vector that represents all changes

that have been made to an instance, by comprising a most recent change number for

the instance, and a most recent known change number for each of the other instances

that are known to the instance, as claimed"

In response to the above argument, the Examiner respectfully submits that

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a

general allegation that the claims define a patentable invention without specifically

pointing out how the language of the claims patentably distinguishes them from the

references.

In further response to the above argument, the Examiner respectfully submits

that Peng discloses "The summarizing version vector of an object container is in effect

the summary of the version vectors of all the objects and the update stamps of all the

differential updates in the object container [Col 15 lines 63-66]. ... *The time stamp in*

an update stamp can be real time, an update sequence number, or whatever is

meaningful to the application". [Col 16 lines 23-25] (emphasis added)

The examiner recognizes that obviousness can only be established by combining

or modifying the teachings of the prior art to produce the claimed invention where there

is some teaching, suggestion, or motivation to do so found either in the references

themselves or in the knowledge generally available to one of ordinary skill in the art.

See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958

F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

"Test of obviousness is not whether features of secondary reference may be

bodily incorporated into primary reference's structure, nor whether claimed invention is

expressly suggested in any one or all of references; rather, <u>test is what combined</u>

<u>teachings of references would have suggested to those of ordinary skill in art</u>."

In re Keller, Terry, and Davies, 208 USPQ 871 (CCPA 1981).

Examiner is entitled to give claim limitations their broadest reasonable

interpretation in light of the specification.

During patent examination, the pending claims must be 'given the broadest

reasonable interpretation consistent with the specification.' Applicant always has the

opportunity to amend the claims during prosecution and broad interpretation by the

examiner reduces the possibility that the claim, once issued, will be interpreted more

broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969).

Reference is made to MPEP 2144.01 – Implicit Disclosure

"[I]n considering the disclosure of a reference, it is proper to take into account not only
specific teachings of the reference but also the inferences which one skilled in the art
would reasonably be expected to draw therefrom." In re Preda, 401 F.2d 825, 826,
          159 USPQ 342, 344 (CCPA 1968)

Subsequent to an analysis of the claims it was revealed that a number of

limitations recited in the claims belong in the prior art and thus encompassed and/or

implicitly disclosed in the reference (s) applied and cited. It is logical for the examiner to focus on the limitations that are "crux of the invention" and not involve a lot of energy and time for the things that are not central to the invention, but peripheral. The examiner is aware of the duties to address each and every element of claims, however, it is also important that a person prosecuting a patent application before the Office or an stakeholders of patent granting process make effort to understand the level of one of ordinary skill in the (data processing) art or the level one of skilled in the (data processing) art, as encompassed by the applied and cited references. The administrative convenience derived from such a cooperation between the attorneys and examiners benefits the Office as well the patentee.

For the above reasons, Examiner believes that rejection of the last Office action was proper. From the foregoing applicants have not met the requirements needed to traverse the rejections made to this application under 35 U.S.C. 103. Hence rejections as applied to claims 9-10, 19-20, and 29-30 of the last Office action under this section are sustained.

Claim Rejections - 35 USC § 101

8.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9.   To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application is either

disclosed in the specification or would have been known to a skilled artisan, or (B) be

limited to a practical application with useful, concrete and tangible result.

10.   Claims 21-30 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

11.   Claims 21 – 30 do not recite a practical application by producing a physical

transformation or producing a useful, concrete, and tangible results. To be useful the

claimed invention must establish a specific, substantial, and credible utility. To be

concrete the claimed invention must be able to produce reproducible results. To be

tangible the claimed invention must produce a practical application or real world result.

Claims 11-20 are not limited to tangible embodiments in view of Applicant's

disclosure.

These claims appear to constitute solely software per se and/or appear to

constitute solely an abstract idea without any practical application. These claims do not

indicate use of hardware on which the software runs to perform the steps recited in the

body of the claim. The program does not appear to have been stored in a tangible

storage medium therefore it is program per se. Software or program can be stored on a

medium and/or executed by a computer.

Claim Rejections - 35 USC § 102

12.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13.   Claims 1-8, 11-18 and 21-28 are rejected under 35 U.S.C. 102(b) as being

anticipated by Patent No: US 6, 317, 754 to Peng (hereinafter Peng).

Claim 1.

Peng discloses:

A method for synchronizing a plurality of instances for a data platform, said

method comprising [Synchronization, synchronization manager (adapter), objects

(instances), Col 9 lines 25-30, 31-36, Figs 2-7]:

uniquely enumerating changes in sequence on an instance by instance basis

using a change number [update stamp, identifier, Col 3 lines 18-20, 43-45];

maintaining a vector for each instance, said vector comprising a most recent

change number for said instance, and a most recent known change number for each

other instances from among said plurality of instances that are known to said instance

each being a known instance, wherein said vector represents all changes that have

been made to said instance [vector, update stamps, identifier, Col 3 lines 15-20, 43-45,

Col 10 lines 7-13, Col 15 lines 63-67, Col 16 lines 20-25].

Claim 2.

Peng discloses the elements of claim 1 as above and furthermore it discloses

wherein said change number comprises a unique identification number for said instance

and a relative incremental count of changes made to said instance [update stamps
(incremental count), identifier, Col 3 lines 15-20].

Claim 3.

Peng discloses the elements of claim 1 as above and furthermore it discloses
wherein a first instance, to partially synchronize with a second instance, requests
changes from said second instance by sending to said second instance its vector, and
wherein said second instance, based on the vector it receives from said first instance,
sends to said first instance only those changes that said first vector has not yet received
[vector, differential synchronization (partially synchronize), objects (instance), Col 3
lines 26-35, Col 5 lines 48-61].

Claim 4.

Peng discloses the elements of claim 3 as above and furthermore it discloses
wherein said second instance, based on the vector it receives from said first instance,
further determines that said first instance has changes said second instance, has not
yet received, and sends its own vector to said first instance to request these changes,
and wherein said first instance, based on the vector it receives from said second
instance, sends to said second instance only those changes that said second vector
has not yet received [sends vectors, receive vectors, Col 5 lines 40-59].

Claim 5.

Peng discloses the elements of claim 1 as above and furthermore it discloses

wherein a first instance, when changing a first Item to relate via a Relationship to a

second Item that was not previously being synchronized, to send all change information

pertaining to said second Item to a second instance when synchronizing with said

second instance so that said second Item in said second instance is synchronized with

said second Item in said first instance [Col 10 lines 21-29].

Claim 6.

Peng discloses the elements of claim 1 as above and furthermore it discloses

when by default operation a parent Item is transmitted before a child Item to said parent

Item, and wherein a plurality of changes are typically transmitted in sequential order of a

plurality of change numbers corresponding to said changes during a synchronization,

and wherein between synchronizations a child Item is changed and then a parent Item

is changed in a first instance, any change units pertaining to said child Item are sent

from said first instance to a second instance during a synchronization only after all

change units pertaining to the parent Item are sent [synchronization, ordering, Col 6

lines 31-39].

Claim 7.

Peng discloses the elements of claim 1 as above and furthermore it discloses

wherein, for an Item deleted by a first instance, a tombstone comprising the

identification of the Item deleted is created, and said tombstone is sent as part of a

synchronization to notify a second instance to identify the Item to be deleted in said

second instance [delete, identifier, Col 13 lines 57-63].

Claim 8.

Peng discloses the elements of claim 7 as above and furthermore it discloses

wherein, for a first instance having a parent Item and a first child Item to said parent

Item, when said child Item is deleted and then said parent Item is deleted, said first

instance sending only the change to said parent Item to a second instance during a

synchronization where (a) the deletion of a parent Item automatically results in the

deletion of all children Items for said parent or (b) the second instance, receiving the

tombstone for the parent Item, proceeds to delete the parent Item and automatically

deletes the child Item [delete, Col 6 lines 46-50, Col 13 lines 57-63].

14.   Subject matter of claims 11 – 18 and 21 – 28 are rejected in the analysis

above in claims 1 – 8 and these claims are rejected on that basis.

Claim Rejections - 35 USC § 103

15.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16.   Claims 9-10, 19-20 and 29-30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Peng in view of Pub No: 2004/0267834 A1 to Sasaki et al

(hereinafter Sasaki).

Claim 9.

        Peng discloses the elements of claim 1 as above but does not explicitly indicate

the elements of claim 9, wherein a first Relationship and a second Relationship of a first

instance swap names using a temporary name element such that, in order, (a) the

name of the first Relationship is transferred to said temporary name element, (b) the

name of the second Relationship is transferred to said first Relationship, and (c) said

name stored in the temporary name element is copied to said second Relationship, and

wherein said first instance synchronizes with a second instance and sends a duo of

change units representing, in order, (i) the new name for said first Relationship and (ii)

the new name for said second Relationship, and wherein effecting the first of said duo

of changes results in an attempted change having an error in the second instance

because a result of said first change is for the first Relationship and the second

Relationship having the same name, a method by which said second instance proceed

to copy said name of the first Relationship to a local temporary name element and

[Synchronization, related object, Sasaki paragraph 0045, 0068, Fig 3A-6]:

        if, during the synchronization, a subsequent change is received for copying the

name of said second Relationship to said first relationship, then performing said change

as well as also copying said name in said local temporary name element to said first

Relationship [copy, related object, synchronization, keys, replaced (change), Sasaki paragraph 0054, 0068, Fig 3A-6]; and

if, during the synchronization, a subsequent change is not received for copying the name of said second Relationship to said first relationship occurs, then raising a conflict regarding for the attempted change [copy, related object, synchronization, keys, Sasaki paragraph 0068, Fig 3A-6].

It would have been obvious to one of ordinary skill in the art of data processing to have combined the two references because the elements as disclosed by Sasaki would have enabled Peng to avoid conflicts with the storage of processing capacities of the mobile device, such as, using excessive amount of memory to store related objects which adversely impacts the performance of the mobile device [Sasaki paragraph 0005].

Furthermore Sasaki disclosure would serve to enable Peng download all objects even though the data objects related to a particular data object may not be already present in the device [Sasaki paragraph 0005].

Claim 10.

Peng discloses the elements of claim 1 as above and furthermore it discloses wherein, for synchronization between a first instance on a storage platform that allows a dangling relative reference and a second instance on a storage platform that does not allow a dangling relative reference that include at least one change to a relative reference and at least one other change, sending said change to said relative

references after said one other changes [key deleted or ignored (dangling relative reference), copy, related object, synchronization, keys, Sasaki paragraph 0068, Fig 3A-6].

17.   Subject matter of claims 9 – 20 and 19 – 30 are rejected in the analysis above in claims 9 – 10 and these claims are rejected on that basis.

Conclusion

18.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact information

19.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Emeka Ebirim whose telephone number is 571-272-

3994. The examiner can normally be reached on 8:30pm - 5:00pm.

      If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hosain Alam, can be reached on 571-272-3978. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

      Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Emeka Ebirim
Examiner
Art Unit 2166

JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100